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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,244	08/10/2001	Tony S. Kaushal	016301-041700US	4319

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APPLIED MATERIALS, INC.
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EXAMINER

DANG, THI D

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 10/04/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,244

Applicant(s)

KAUSHAL ET AL.

Examiner

Thi Dang

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by *Schaeffer et al.*

Schaeffer discloses a method of forming a coated substrate, which includes the steps of : forming a bond coating (i.e., an adhesion-promoting layer) (24) over the substrate (22), then forming a thermal barrier coating (26) over the adhesion-promoting layer (col. 4, lines 33-39). The barrier coating contains Yttrium oxide and may be formed by conventional deposition techniques (col. 3, lines 1-29). Applicants' method as claimed does not define over that of *Schaeffer*.

3. Claims 8 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by *Iskanderova et al.*

Iskanderova discloses a method for surface modification by ion implantation, which includes the steps of: ion implantation a substrate with metal ions, and oxidative conversion an upper portion of the implanted layer (col. 5, lines 46-60). The oxidized layer provides an erosion resistant layer. The metal ions implanted include Sm and Gd (rare earth metals) (col. 8, lines 36-39). Applicants' method as claimed does not define over that of *Iskanderova*.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Schaeffer* et al.

Schaeffer discloses that the thermal barrier coating may be formed by sputter deposition (col. 3, lines 6-10). It would have been obvious to form the thermal barrier coating of *Schaeffer* by sputter deposition in an oxygen-containing ambient because such technique is conventional in the art.

6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Iskanderova* et al.

It would have been obvious to use the ion techniques recited in claims 12-14 for ion implantation in *Iskanderova*'s method because the claimed ion techniques are conventional in the art.

Allowable Subject Matter

7. Claims 1-7 are allowed.

8. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:
Even though the prior art does disclose a substrate processing chamber having a component

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coated with a rare-earth-containing protective coating, it does not disclose an adhesion layer between the protective coating and the member being coated.


Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Takai*, and *Nakahara et al* are cited to show prior art corrosion resistant coatings.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thi Dang whose telephone number is (703) 308-1973. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


THI DANG
PRIMARY EXAMINER
GROUP 1700